another and higher realm, harmony imposes even upon the muses.

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CLINICAL PSYCHOLOGY: WHAT IT IS AND WHAT IT IS NOT

ON an occasion like this[1] it would seem proper, representing as I do one of the newest of the sciences, that I address myself to some of the basic questions of this science. Perhaps the very first question with which one is confronted is simply this: "In view of the rapid multiplication of the sciences, by what right does clinical psychology lay claim to an independent existence?" That is a question which may perturb some sensitive minds, but it does not disconcert the clinical psychologist, for he regards the question as perfectly legitimate and capable of satisfactory answer.

It is just and proper that a new claimant to membership in the family of sciences should be required to present her credentials. It is a natural human trait to challenge or contest the claims of a newcomer. It has ever been thus. Every branch of knowledge before winning recognition as an independent science has been forced to demonstrate that it possesses *a distinct and unique body of facts* not adequately treated by any other existing science; or that it approaches the study of a *common body* of facts from a *unique* point of view, and with methods of its own. Psychology, biochemistry, dentistry, eugenics, historiometry and many other sciences have been thus obliged to fight their way inch by inch to recognition as independent sciences. It is not long since physiology claimed psychology as its own child and stoutly contested her rights to existence; nor is it long since medicine denied any right to independent existence to dentistry. It is no surprise that a number of sciences now claim clinical psychology as part and parcel of their own flesh and blood, and that they deny her the right to "split off from the parent cell" and establish an unnursed existence of her own. Just as nature abhors a vacuum, so science abhors the multiplication of sciences; just as the big corporation octopus in the industrial world tries to get monopolistic control of the sources of production and distribution, so the various sciences, naturally insatiable in their desire for conquest, attempt only too often to get monopolistic control of all those elements of knowledge which they may be able to use for their own aggrandizement, whether or not they have developed adequate instruments for scientifically handling those elements.

Clinical psychology, however, is quite ready to contest the attempts to deprive her of her inalienable rights to the "pursuit of life and happiness." Fundamentally, she bases her claims to recognition as an independent science on the fact that

[1] Substance of an address delivered before the Conference on the Exceptional Child, held under the auspices of the University of Pittsburgh, April 16, 1912. Lest misapprehensions arise, it should be clearly understood that in this discussion I am concerned only with the relation of *clinical psychology* to *mentally* exceptional school children; and that I distinctly recognize a different type of exceptional children, namely, the *physical* defectives. The physical defectives should be examined by skilled pediatricians. The clinical psychologist is interested in physically exceptional children if they manifest mental deviations. Moreover, while I hold that the psycho-clinical laboratories must become the clearing houses for all types of *mentally* or *educationally* exceptional children in the schools, nearly all mentally exceptional children should be given a physical examination by consulting or associated medical experts. Physical abnormalities should, of course, be rectified, whether or not it can be shown that they sustain any causal relation to any mental deviations which may have been disclosed in the psycho-clinical examination. They may claim treatment in their own right.

she *does* possess a unique body of facts not adequately handled by any existing science, and that she investigates these facts by methods of her own. These facts consist of *individual mental variations,* or the phenomena of *deviating or exceptional mentality.* In other words, clinical psychology is concerned with the *concrete* study and examination of the behavior of the *mentally exceptional individual* (not groups), by its own methods of observation, testing and experiment.

In the study or examination of individual cases, the clinical psychologist seeks to realize four fundamental aims:

1. *An Adequate Diagnosis or Classification.*—He attempts to give a correct description of the nature of the mental deviations shown by his cases; he tries to determine whether they are specific or general, whether they affect native or acquired traits; he attempts to measure by standard objective tests the degree of deviation of various mental traits or of the general level of functioning; he seeks to arrive at a comprehensive clinical picture, to disentangle symptom-complexes and to reduce the disorders to various reaction types.

2. *An Analysis of the Etiological Background.*—His examination is bent not only on determining the present mental status of the case, but on discovering the causative factors or agents which have produced the deviations—whether these factors are physical, mental, social, moral, educational, environmental or hereditary. In order to arrive at a correct etiology the psycho-clinician makes not only a cross-section analysis of the case, but also a longitudinal study of the evolution of the deviation or symptom-complex. Therefore he does not limit himself merely to a psychological examination, but requires a dento-medical examination and a sociological and hereditary examination. The physical examination should be made by experts in dentistry and in the various specialties in the field of medicine. The psycho-clinicist, however, should be so trained in physical diagnosis that he can detect the chief physical disorders, so that he can properly refer his cases for expert physical examination.

3. A determination of the *modification* which the disorder has wrought in the *behavior of the individual.* He should determine what its consequences have been: what effects it has had upon his opinions, beliefs, thoughts, disposition, attitudes, interests, habits, conduct, capacity for adaptation, learning ability, capacity to acquire certain kinds of knowledge or various accomplishments, or to do certain kinds of school work. He should seek to locate the conflicts between instincts and habits which may have been caused by the deviations.

4. The determination of the *degree of modifiability* of the variations discovered. Can the deviations be corrected or modified, and if so to what extent and by what kinds of orthogenic measures? A clinical psychologist is no less a scientific investigator than a consulting specialist; he diagnoses in order to prognose and prescribe. His aim first and last is eminently practical.

Basis of Selection of Cases

The clinical psychologist selects his cases not so much on the nature of the cause of the deviations as on the nature of the deviations themselves, and the nature of the treatment. He is interested in cases which, first of all, depart from the limits of mental normality. *Exceptional mentality,* or, if you please, *mental exceptionality,* is his first criterion. In the second place, he is interested in those cases in which the nature of the treatment—the *process* of *righting* the mental variations, of straightening out the deviations, the orthogenesis—

is wholly or chiefly or partly *educational*. In the term educational I include training of a hygienic, physiological (in Seguin's sense), pedagogical, psychological, sociological or moral character.

GROUPING OF CASES

It is thus evident that the clinical psychologist may group his cases into two main classes.

A. Those in which the *mental variations are fundamental* or primary, and the physical disabilities only accessory or sequential. With these cases the treatment must be primarily educational and only secondarily medical. What types of children are included in this group?

I. *Feeble-minded Children.*—Feeble-mindedness formerly was regarded as an active disorder—a disease—and was accordingly treated exclusively medically. The theory of causation was wrong and so the results were unsatisfactory. Since the year 1800 (Itard, the apostle to the feeble-minded) and particularly since the year 1837 (Seguin, the liberator of the feeble-minded), it has become increasingly apparent that feeble-mindedness is an arrest of development; and accordingly since that time the condition has been primarily educationally treated instead of medically. This change in point of view has revolutionized the treatment of the feeble-minded. The person who did most to ameliorate their condition is Seguin, whose method, almost entirely educational, has served as the model for the effective institutional work for the feeble-minded done since his day, although we have outgrown various details of his system. Moreover, it served as the chief inspiring force for the constructive orthogenic work done for the feeble-minded within the last decade or so by Montessori. She, herself a physician, but with special training in psychology and pedagogy, tells us that in 1898 as a result of a careful study of the problem of feeble-mindedness she became persuaded that the problem was primarily a pedagogical and not a medical one. It is granted without question, of course, that there is a medical side to the care of the feeble-minded just as there is a medical side to the care of the normal child. Nay, owing to the heightened degree of susceptibility to disease and accidents found among the feeble-minded, the medical side looms larger in the care of the feeble-minded than in the care of normals. Indeed, no institution for the feeble-minded can be properly organized without an adequate staff of medical experts; but fundamentally the problem of the amelioration of the lot of feeble-minded children is an educational one—their hygienic, pedagogical and moral improvement, as well as their elimination by the method of colonization or sterilization.

II. *Retardates,* technically so-called—of which there are probably on a conservative estimate 6,000,000 in the schools of the United States. Some of these are retarded (1) merely pedagogically in a relative sense—relative to an *arbitrary curricular standard.* Many children do not fit the standard, because the standard itself is off the norm. It is largely a case of a misfit curriculum instead of a misfit child. So far as this class of misfits is concerned the problem is simply one of correct adjustment of the pedagogical demands of the curriculum.

A considerable percentage of the retardates, however, are retarded because of (2) *genuine mental arrest of development.* They are as truly arrested or deficient as the feeble-minded, but to a *lesser extent.* The difference is a *quantitative* and not a qualitative one, and the problem of correc-

tion consists fundamentally in providing a right educational regimen.

Then there is (3) a smaller proportion of retardates who are mentally retarded because of *environmental handicaps,* such as bad housing, home and neighborhood conditions, bad sanitation, lack of humidity, lack of pure air or excessive temperature in the schoolroom, vicious or illiterate surroundings, frequent moving or transfer, emigration which may cause linguistic maladaptation, etc. With such retardates the problem is partly sociological, partly hygienic, and partly pedagogical.

We have a final group of children (4) who are mentally retarded because of some *physical defect.* With children of this type the problem is partly medical and partly educational. The first efforts made in behalf of such children should be medical and hygienic. Undoubtedly the removal of physical handicaps will restore some pupils to normal mentality, while in the case of other pupils the results will be negative. Unfortunately there are very few scientific studies available of the orthophrenic effects of the correction of physical defects.[2] Many of the studies in this field have a questionable value because of the obvious, but evidently unconscious, bias of the investigators. Some desire to show favorable results and, therefore, unconsciously select only the favorable cases; others are swayed by the opposite motive and accordingly tend to select the negative cases. Hence, at the present time we find considerable diversity of opinion as to the orthogenic influences of the correction of physical disorders. The opinion of John J. Cronin, M.D., probably approximates the truth:

> The successes simply mean that a large number of children were perfect except for some one abnormality. . . . The alleviation of any single kind of physical handicap is merely one step towards the successful result sought, and many other factors must obtain before some measure of success is assured.

Likewise A. Emil Schmitt, M.D.:

> It should constantly be borne in mind that if every physical defect has been successfully removed the mental unbalance or deficiency can remain unaltered, inasmuch as it was primarily a mental defect and can be reached only by methods of education or psychological treatment.

While I am quite convinced that all mentally retarded children should undergo a careful physical examination, and that such physical corrective measures should be applied as are indicated by expert medical opinion, yet it needs to be re-emphasized that the removal of a physical disability is frequently only the first step toward restoration. If the child has fallen behind pedagogically or mentally, he will in many cases need special pedagogical attention if he is to catch step with the class procession; moreover, after a certain critical age has been passed the removal of physical obstructions exercises only a slight orthophrenic influence, and the reestablishment of effective mental functioning, if it can be done at all, will require the prolonged application of a special corrective pedagogy.

III. *The Super-normals.*—Both of the above types of children come on the minus side of the curve of efficiency. On the other side we find the plus deviates—the bright, brilliant, quick, gifted, talented, precocious children. These children may present no peculiarities on the physical side, if we except the type of nervously unstable, precocious children. With the supernormal

[2] However, see an attempt at the scientific measurement of the orthophrenic effects of the correction of dental defects in J. E. Wallace Wallin's "Experimental Oral Euthenics," *The Dental Cosmos,* 1912, pp. 404–413, 545–566. Also, "Experimental Oral Orthogenics," *The Journal of Philosophy, Psychology and Scientific Methods,* 1912, pp. 290–298.

child the problem is almost entirely an educational one: the introduction of schemes of flexible grading; of fast, slow and normal sections, and of supernormal classes; providing special opportunities for doing specialized work, and a special pedagogy, which should probably be as largely negative as positive. If there is any one child in our scheme of public education which has been neglected more than any other, it is the child of unusual talents. A nation can do no higher duty by its subjects than to provide those conditions which will rescue its incipient geniuses from the dead-level of enforced mediocrity.

IV. *Speech defectives,* particularly the two and one half per cent. (approximately) of stutterers and lispers who encumber our classes. In few fields of scientific research is it possible to find such astonishing diversity of so-called expert opinion as on the question of the causation of stuttering (or stammering). It is claimed to be a gastric, pneumogastric, lung, throat, lip, brain, hypoplastic, nervous and mental disorder. It is said to be a form of epilepsy, a form of hysteria, and a form of mental strife, or repression, between latent and manifest mental contents. Moreover, few writers show such a consummate genius for self-contradiction as writers on stuttering. Before me lies a reprint of a recent dissertation on the "Educational Treatment of Stuttering Children." The writer begins by saying that stuttering is a "pathological condition," a disease, and that therefore its treatment belongs to a specialist on diseases. The disease appears, however, on the second page to be merely "a purely functional neurosis," while on the last page the trouble is nothing more than a "mental one," caused by influences acting on the mind. As a matter of fact, the treatment which the writer recommends is through and through educational and largely psychological. It consists of certain physical exercises, designed not so much to strengthen certain organs as to win the patient's interest and restore his self-confidence; and certain psychotherapeutic and hypnotic exercises.

Waiving for the time being the nature of the cause, we can agree on one thing; namely, that the methods of treating stuttering (and lisping) which have been proved effective are almost exclusively educational. Many of the neurotic symptoms found in the stutterer are the results of mental tension and will disappear with the correction of the stuttering.

V. *Incipient psychotics,* or children who show developmental symptoms of mental disorders or mental alienation. Here we meet with the same controversy between the advocates, on the one hand, of a *somatogenic* theory, and, on the other hand, of a *psychogenic* theory of causation. While it must be admitted that many of the psychoses are certainly organic, others almost as certainly are functional and are produced by idiogenic factors (a view entertained by such well-known psychiatrists as Meyer, Freud, Janet, Dubois, Jones, Prince). Now, irrespective of whether the cause is chiefly physical or mental, it is being recognized by a number of the leading present-day psychiatrists that drug treatment for the majority of the insane, whether juvenile or adult, is secondary to the educational treatment. Instead of merely prescribing physical hygiene for the insane, leading alienists are now prescribing mental hygiene. The cure is being conceived in terms of a process of reeducation. Moreover, so far as concerns the mentally unstable child in the schools, the chief reliance is obviously on hygienic and educational guidance.

B. Cases in which the *physical devia-*

tions are fundamental or primary, and the mental variations sequential, but the remedy partly or chiefly educational. Here we include malnutrition, rickets, marasmus, hypothyroidism, tuberculosis, heart trouble, chorea and similar diseases. In all of these the treatment must be primarily medical, although there should be a special temporary educational regimen for these children. This group also includes the blind and the deaf. But here the treatment is almost wholly educational. The physical defects are incurable, but the mental defects can be partly overcome by proper compensatory educational treatment. The epileptic also must be added to this group. Epilepsy is evidently an active disorder or disease process, although the pathology is wrapped in the deepest obscurity. The epileptics appear like purely medical cases. The medical aspect certainly is important, but the records show that only from 5 to 10 per cent. are curable, and that the attacks can be as readily modified or regulated in most cases by proper hygienic treatment as by drug medication or surgical interference. Even with these unfortunates it can be said that the best results come from a proper medico-educational régimé—colonization, out-door employment, industrial schooling, bathing, etc.

SUMMARY OF IMPORTANT CONCLUSIONS

We are thus brought to the two following conclusions:

1. There is a set of unique facts—facts of individual mental variation—which no existing science has adequately treated. It is with these facts that the work of the clinical psychologist is concerned. Just as psychology became an independent science by demonstrating that it possessed a legitimate claim to a unique world of facts, so clinical psychology is ready to make her declaration of independence and dedicate herself to the investigation of a body of facts—facts of individual mental variation—not hitherto adequately handled by any existing science. It is concerned with the study of individual cases of deviate mentality, particularly with those types which are amenable to improvement or correction by psycho-educational processes.

2. The proper handling of these cases, whether for purposes of examination, recommendation or prescription, can only be done by a *psycho-educational specialist* who possesses a technical knowledge of educational and child psychology, of child hygiene, of the science and art of education, and of various classes of mental defectives or deviates. He should possess a thorough grounding in clinical procedure, particularly in the methods of clinical psychology, while he must also have a certain amount of training in pediatrics, physical diagnosis, neurology and psychiatry. He must be thoroughly skilled in the differential pedagogy appertaining to various types of mentally exceptional children.

C. The Relations of Clinical Psychology —Some Affirmations and Denials.—There is a number of sciences with which clinical psychology is, will be, or should be, closely related, but which are not synonymous with clinical psychology.

1. Clinical psychology is not the same as *psychopathology*. The typical alienist is concerned with the study and treatment of mental disorders (technically called psychoses); the clinical psychologist, on the other hand, is concerned *particularly* (though not solely) with the study of *plus* and *minus deviations* from normal mentality. The alienist works chiefly with adults, the clinical psychologist with children. Few alienists possess any expert knowledge of the literature bearing on child or educational psychology, mental deficiency, retardation or acceleration,

stuttering or lisping, special pedagogy or psycho-clinical methods of testing. An alienist accordingly is not to be considered a specialist on the mentally exceptional child in the schools unless indeed he has supplemented his general medical and psychiatric education with a technical study of the psychological and educational aspects of the problem. The alienist of the future will certainly have to secure a different preparation from that now furnished in the medical schools, if he is to enter the field of pedagogic child study.

Before me lies the report of the department of medical inspection of a large school system. Six hundred retarded children were examined in this department, which is in charge of an alienist, who, as I am told, is an expert on the questions of *adult insanity,* but who has no specialized preparation in the psychology and pedagogy of the mentally defective child. Of these children 49.7 per cent. are recorded as feeble-minded. Applying this figure to the 6,000,000 retardates of the public schools of the country, we get a total feeble-minded school population of 3,000,000. This figure, it need scarcely be said, is monstrously absurd. It is fully ten times too large. Feeble-mindedness and backwardness in children, it must be said, are distinct problems from mental alienation, and require for their satisfactory handling a specialist on mentally deviating children. A high grade feeble-minded child can not be identified merely by some rule-of-thumb system of intelligence tests. Feeble-mindedness involves more than a given degree of intelligence retardation. At the same time, lest I be misunderstood, it should be specially stated that psychiatry and clinical psychology will be mutually helped by a closer union. Clinical psychology has many important facts and a valuable experimental technique to offer to psychopathology, and psychopathology in turn is able to contribute facts of great value, and more particularly an effective clinical method of examination, to clinical psychology. As the idiogenic conception of the causation of various psychoses wins greater recognition, clinical psychology will become more and more indispensable to the psychiatrist. It is certain that the efficiency of the clinical psychologist will be greatly increased by a study of mental alienation—not a study of texts on psychiatry, but a first-hand study in institutional residence of individual cases. Any one intending to do psycho-clinical work with mentally deficient children certainly should spend a year or two in residence at institutions for feeble-minded, epileptic and alienated children. The clinical psychologist should be prepared to recognize cases of incipient mental disorder, so that he will be enabled to select these cases and refer them to a psychiatric specialist for further examination.

2. Clinical psychology is not *neurology.* There are important neurological aspects involved in the study of mentally exceptional children. Mental arrest can be largely expressed in terms of neurological arrest, and a clinical psychologist should have a first-hand knowledge of nerve signs and a practical acquaintance with the methods of neurological diagnosis. His knowledge of neurology should be sufficient to enable him to pick out suspected nervous cases and refer them for expert examination by a neurologist. However, it must be emphasized that neurology touches only one side—though an extremely important side—of the problem of exceptional mentality.

3. Clinical psychology is not synonymous with *general medicine.* The average medical practitioner certainly knows far less about the facts of mental variation in

children than either the psychiatrist or neurologist or even the class-room teacher. This fact should occasion no surprise when it is stated that the study of psychology as a science has been practically ignored in the medical curricula throughout the country. The clinical psychologist, however, as I have already said, should be able to detect the chief physical defects found in school children, so that if the laboratory of the clinical psychologist assumes the function of a clearing house for the exceptional child he may be able to refer all suspected cases to proper medical clinics for expert examination and treatment.

4. Clinical psychology is not *pediatrics*. To be sure, the pediatrician deals with children. But his attention is focused on the physical abnormalities of infants; his interest in the phenomena of mental exceptionality is liable to be incidental or perfunctory. In fact, one may read some texts on pediatrics from cover to cover without so much as arriving at a suspicion that there is a body of unique facts converging on the phenomena of departure from the limits of mental normality which require intensive, specialized, expert study and diagnosis. So far as the physical ailments or disabilities of young children are concerned the pediatrician is in a position to render valuable service to the psycho-clinicist; likewise so far as concerns the mental deviations of children the psycho-clinicist is able to render valuable aid to the pediatrician. But one must not confuse pediatrics with clinical psychology.

5. Clinical psychology is not the same as *introspective, educational or experimental psychology*. It differs from these in its method, standpoint and conceptions. While the clinical psychologist should be grounded in introspective and, especially, experimental, educational and child psychology, expertness in these branches of psychology does not in itself confer expertness in practical psycho-clinical work. Such expertness comes only from a technical training in clinical psychology and from a first-hand prolonged study by observation, or experiment, or test of various kinds of mentally exceptional children, particularly the feeble-minded, the epileptic and the retarded. The skilled specialist in experimental or educational psychology or experimental pedagogy, is no more qualified to *clinically* examine mental cases, than is the skilled zoologist, physiologist or anatomist able to *clinically* examine physical cases. Clinical work, both in psychology and medicine, requires clinical training. The assumption that any psychologist or educationist is qualified to do successful psycho-clinical work, after learning how to administer a few mental tests, is preposterous and fraught with the gravest consequences. Clinical psychology can have no standing in the professions as long as we permit this absurd notion to prevail.

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Pensions in the Rockefeller Institute

Pensions for its members and associate members have been provided by the governing boards of the Rockefeller Institute for Medical Research, and have been financially secured by the generosity of Mr. John D. Rockefeller, who has with this purpose in view increased the endowment of the institute by a gift to it of securities amounting to about $500,000 in value. The pension rules which have been adopted provide three-quarters-pay pensions for members of the institute retiring at the age of 65 after fifteen or more years of service, and pensions of from one half to three quarters of full pay, according to the length of service, for members and associate members who retire at 60 years of age. There is also a provision for total disability after ten